

AMENDMENTS TO THE CLAIMS:

Please cancel claims 1-22.

Please amend claims 23-43 as follows:

23. (previously presented) An apparatus for forming a bottom end wall of a carton from a rectangular carton blank having open top and bottom ends, first, second, third and fourth body panels adjoining first, second, third and fourth bottom end closure panels, respectively, with the first and third bottom end closure panels oppositely disposed and scored to fold inwardly when the second and fourth bottom end closure panels are folded inwardly down to form the bottom of the carton, comprising:

a) a mandrel adapted to receive said carton blank through said open top end of said carton blank, with said bottom end closure panels extending beyond a distal free end of said mandrel, said distal free end indexable through a plurality of carton processing stations;

b) a heating station;

c) a folding station including:

i) a pair of oppositely disposed reciprocating break fingers to contact and fold inwardly said first and third bottom end closure panels; and

ii) a reciprocating hooder unit having first and second angled surfaces and a direction of movement along a longitudinal axis of said mandrel at said folding station such that said angled surfaces contact and fold inwardly down said second and fourth bottom end closure panels as said hooder unit moves toward said mandrel;

d) a pressure sealing station for sealing together said folded bottom end closure panels;

and

e) wherein said distal free end of said mandrel sequentially indexes through said heating

station, said folding station and said pressure sealing station, with said first body panel facing forward relative to the direction of mandrel movement.

24. (previously presented) The apparatus as defined in Claim 23, further comprising a J-flap pull finger recessed within said hooder unit and extending acutely past the plane of said first angled surface, said J-flap pull finger oriented to catch and fold a scored J-flap region of said second bottom end closure panel.

25. (previously presented) The apparatus as defined in Claim 24, wherein a portion of said first angled surface extends over said second angled surface to form a paper guide path.

26. (previously presented) The apparatus as defined in Claim 25, further comprising an arcuate ski plate between said folding station and a sealing station for maintaining said bottom end closure panels in a folded state as said mandrel indexes said carton from said folding station to said sealing station.

27. (previously presented) The apparatus as defined in Claim 26, wherein said ski plate has a generally rectangular profile and a notch immediately adjacent said folding station sized to permit passage therethrough of said reciprocating forward break finger.

28. (previously presented) The apparatus as defined in Claim 27, wherein said mandrel is affixed to a turret which rotates said distal free end of said mandrel in a circular path through said carton processing stations.

29. (previously presented) The apparatus as defined in Claim 28, having affixed to said turret six equally spaced mandrels.

30. (previously presented) The apparatus as defined in Claim 29, further comprising a mandrel end cap removably affixed to said distal free end of said mandrel.

31. (previously presented) The apparatus as defined in Claim 30, further comprising a carton blank feeding station for loading rectangular carton blanks onto said mandrel, and wherein said distal free end of said mandrel sequentially passes through said feeding station, said heating station, said folding station and said pressure sealing station.

32. (previously presented) The apparatus as defined in Claim 31, further comprising a cooling station, wherein said distal free end of said mandrel sequentially passes through said feeding station, said heating station, said folding station, said pressure sealing station and said cooling station.

33. (previously presented) The apparatus as defined in Claim 32, wherein said pressure sealing station includes a piston and a sealing plate for pressing said folded bottom end closure panels between said sealing plate and said mandrel end cap.

34. (previously presented) The apparatus as defined in Claim 23, wherein said break fingers are generally L-shaped and are pivotable about an end thereof.

35. (previously presented) The apparatus as defined in Claim 33, wherein said break fingers are pivotable to describe an arc of about 90°.

36. (amended) A method of forming a bottom end wall of a carton from a rectangular carton blank having open top and bottom ends, first, second, third and fourth body panels adjoining first, second, third and fourth bottom end closure panels, respectively, with the first and third bottom end closure panels oppositely disposed and scored to fold inwardly when the second and fourth bottom end closure panels are folded inwardly down to form the bottom of the carton, comprising the sequential steps:

a) loading said carton blank onto a rotatable mandrel adapted to receive said carton blank through said open top end of said carton blank, with said bottom end closure panels extending beyond a distal free end of said mandrel and said first body panel facing in the direction of rotation;

b) rotating said mandrel to a heating station;

c) heating said bottom end closure panels;

c) rotating said mandrel to a folding station;

d) folding said first and third bottom end closure panels inward with a pair of oppositely disposed reciprocating break fingers;

e) folding said second and fourth bottom end closure panels inwardly down with a reciprocating hooder unit having first and second angled surfaces and a direction of movement along a longitudinal axis of said mandrel at said folding station such that said angled surfaces contact and fold inwardly down said second and fourth bottom end closure panels as said hooder unit moves toward said mandrel;

~~f) folding a l-flap pull finger extending past the plane of one of said angled surfaces of said hooder unit is adapted to catch and fold a scored l-flap region of said second bottom end closure panel;~~

g) ~~f~~) rotating said mandrel to a pressure sealing station; and

h) ~~g~~) applying pressure to seal together said folded bottom end closure panels to form a bottom end wall of said carton.

37. (previously presented) The method as defined in Claim 36 wherein a distal free end of said mandrel traverses a circular path as said mandrel rotates about a central axis.

38. (previously presented) The method as defined in Claim 37, wherein said bottom end closure panels are maintained in a folded state during the rotation of said mandrel to said pressure sealing station by an arcuate ski plate having a generally rectangular profile between said folding station and said sealing station.

39. (previously presented) The method as defined in Claim 38 wherein said mandrel is adapted to receive said carton blank by means of a mandrel end cap removably affixed to said distal free end of said mandrel.

40. (cancelled).

41. (amended) The method as defined in Claim ~~36~~ 40, further comprising a cooling step subsequent to said folding a ~~j-flap pull finger~~ step.

42. (previously presented) The method as defined in Claim 41, wherein said cooling step follows said sealing step.

43. (previously presented) The method as defined in Claim 41, wherein said cooling step is simultaneous with said sealing step.